UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,036	01/22/2002	Gradus Janssen	YOR920010266US2 (590.071)	1397

			EXAMINER
35195	7590	11/20/2003	GARBOWSKI, LEIGH M

FERENCE & ASSOCIATES
400 BROAD STREET
PITTSBURGH, PA 15143

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☒ Claim(s) *13 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5)☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .	6)☐ Other: .

Claim Objections

Claims 13-14 are objected to because of the following informalities: the claims

should not be dependent upon claim 7 since they further limit the method under claim 8.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-10 and 13-15 are rejected under 35 U.S.C. 102(b) as being

anticipated by Biere ["The ABCD package"].

As per claim 1, Biere discloses a BDD package comprising: an arrangement for

identifying at least two nodes in a graph [paragraph 1]; said identifying arrangement

being adapted to assign integer numbers to different nodes, whereby the use of pointers

is precluded [paragraphs 3-4]. As per claim 2, Biere further discloses wherein said

identifying arrangement is adapted to assign consecutive integer numbers to different

nodes [paragraph 3]. As per claim 3, Biere further discloses wherein said identifying

arrangements is adapted to assign to a given node an integer number which coincides

with an index in a memory array in which the node resides [paragraphs 1 and 9]. As per

claim 6, Biere further discloses wherein said identifying arrangement is adapted to avoid

the use of reference counts [paragraph 2]. As per claim 7, Biere further discloses

wherein the graph is a DAG [by definition, the examiner takes Official Notice that a BDD

is a DAG representation of a function].

As per claims 8-10 and 13-15, Biere discloses the features of the method and

program storage device as well as the BDD package outlined above.

Claims 1-5, 8-12 and 15 are rejected under 35 U.S.C. 102(b) as being

anticipated by Biliris ["An Efficient Database Storage Structure for Large Dynamic

Objects"].

As per claim 1, Biliris discloses a package comprising: an arrangement for

identifying at least two nodes in a graph [page 302, section 3, first paragraph]; said

identifying arrangement being adapted to assign integer numbers to different nodes,

whereby the use of pointers is precluded [pages 303-304, sections 3.1 and 3.2, figures

3 and 4]. As per claim 2, Biliris further discloses wherein said identifying arrangement is

adapted to assign consecutive integer numbers to different nodes [figures 3 and 4]. As

per claim 3, Biliris further discloses wherein said identifying arrangement is adapted to

assign to a given node an integer number which coincides with an index in a memory

array in which the node resides [page 302, section 3, paragraph 1, figure 1]. As per

claim 4, Biliris further discloses wherein said identifying arrangement is adapted to

access an indexed node via a paging access scheme [pages 302-303, section 3,

paragraphs 1-2; page 304, section 3.3]. As per claim 5, Biliris further discloses wherein

said identifying arrangement is adapted to access an indexed node via a two-step

paging access scheme [pages 302-303, section 3, paragraphs 1-2; page 304, section

3.3].

As per claims 8-12 and 15, Biliris discloses the features of the method and program storage device as well as the package outlined above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Edelkamp discloses "StaticBdd - A fast BDD package".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Marie Garbowski whose telephone number is 703-305-9753. The examiner can normally be reached on days.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

LEIGH M. GARBOWSKI
PRIMARY EXAMINER